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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/236,526	01/25/1999	FELIX KHOURI	081862.P119	1370

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EXAMINER

TSEGAYE, SABA

ART UNIT PAPER NUMBER

2662

DATE MAILED: 11/20/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/236,526

Applicant(s)

KHOURI ET AL.

Examiner

Saba Tsegaye

Art Unit

2662

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 August 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5,7,9-14,16 and 18-49 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5,7,9-14,16 and 18-49 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 5, 12, 18-49 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 5, line 2, it is not clear whether “a hitless rebuild” refers to the same “a hitless rebuild” in claim 1 line 9.

Claim 12, line 3, it is not clear whether “a hitless rebuild” refers to the same “a hitless rebuild” in claim 10 line 9.

Claims 18 and 23, line 4, the word “said card”; and lines 4 and 5, the word “said software” lack antecedent basis.

Claims 28 and 33 line 3, the word “said card” lacks antecedent basis.

Claims 38 and 44, line 6, the word “said card”; and lines 6 and 7, the word “said software” lack antecedent basis.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

4. Claims 18-21, 23-26, 28-31, 33-36, 38-42 and 44-48 are rejected under 35 U.S.C. 102(e) as being anticipated by Rakavy et al. (US 6,324,644).

Regarding claims 18, 23, 28, 33, 38 and 44, Rakavy discloses a method, comprising:

Re-initializing software that is executed on a networking device card, the re-initializing in response to an error (column 9, lines 23-42), the networking device card comprising a processor that executes the software (column 4, lines 7-17), the networking device card comprising a memory that stores information that can be used by the processor to execute the software (column 3, lines 13-39; column 4, lines 7-17), the information further comprising a routing table, the re-initializing not deleting the routing table and state table information from the memory (column 15, lines 3-39).

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Regarding claims 19, 24, 29, 34, 39, 40, 45 and 46, Rakavy discloses the method wherein the memory further comprises non-volatile memory (column 5, lines 50-52).

Regarding claims 20, 25, 30, 35, 41 and 47, Rakavy discloses the method wherein the memory further comprises volatile memory (column 5, lines 46-48).

Regarding claims 21, 26, 31, 36, 42 and 48, Rakavy discloses the method wherein the volatile memory further comprises random access memory (column 5, lines 46-48).

Claim Rejections - 35 USC § 103

5. Claims 1-5, 7, 9-14 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rakavy in view of Burdett et al. (US 6,327,675).

Regarding claims 1, 9 and 10, Rakavy discloses, in Fig. 4, a method of managing a network switch having a processor card including a memory and a processing unit in the processor card comprising:

detecting an error (step 438);

determining if the error is ignorable (step 437);

performing a hitless rebuild in the processor card (steps 437, 418).

Rakavy fails to show the step of determining whether the number of hitless rebuilds has exceeded a pre-given threshold.

Note that to start or reset a processor after error detected is well known in computer and multi-processor systems.

Burdett teaches the step of determining whether threshold has been reached, the threshold corresponding to a number of hitless rebuilds that have occurred within an amount of time (column 5, lines 36-47).

It would have been obvious to one skilled in the art at the time the invention was made to add a threshold determination method, such as that suggested by Burdett, in the Rakavy system. Doing so would provide a fault tolerant system that more effectively recognizes and handles recoverable faults.

Regarding claims 2 and 11, Rakavy discloses, in Fig 4., the method wherein the hitless rebuild includes:

performing an initialization of the memory (step 417); and
protecting a portion of the memory from access by the processing unit during the initialization (column 6, line 63-column 7, line 1).

Regarding claims 3 and 12, Rakavy discloses the method wherein the performing of the hitless rebuild further comprises protecting a portion of the memory that contains a set of routing tables (column 15, lines 3-39).

Regarding claims 4 and 13, Rakavy discloses the method wherein the performing of the hitless rebuild further comprises protecting a portion of the memory that contains a set of state tables (column 15, lines 3-39).

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Regarding claims 5 and 14, Rakavy discloses the method wherein the memory is accessed through a set of memory addresses and the performing of a hitless rebuild further comprises preventing the processing unit from accessing a predetermined set of memory addresses in the set of memory addresses (column 2, lines 43-52).

Regarding claims 7 and 16, Rakavy discloses the method further comprising setting the processing unit to enter into a degraded mode if the error is not ignorable and if the threshold has been reached (Fig. 4, steps 437, 435, 436).

Rakavy fails to show the step of determining whether threshold has been reached. However, as is known in the art, the software in the processing unit could be modified to perform in this manner since the threshold within an amount of time is known.

It would have been obvious to one skilled in the art at the time the invention was made to add a threshold determination method in the Rakavy system to reduce the amount of rest and service disruption of devices in the communication system.

6. Claims 22, 27, 32, 37, 43 and 49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rakavy in view of Burdett as applied to claims 18, 28, 33, 38, and 44 above, and further in view of Treu (US 5,245,615).

Rakavy in view of Burdett discloses all the claim limitation as stated above except for dynamic random access memory.

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Note that dynamic random access memories are more commonly used than RAMs because dynamic random memory is less expensive than static RAM and their circuitry is simpler.

True teaches that random access memory comprises dynamic random access memory (column 2, lines 65-67).

It would have been obvious to one ordinary skill in the art at the time the invention was made to use dynamic RAM, such as that suggested by True, in the memory of Rakavy in order to provide less expensive memory.

Response to Arguments

7. Applicant's arguments with respect to claims 1-5, 7, 9-14 and 16 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Saba Tsegaye whose telephone number is (703) 308-4754. The examiner can normally be reached on Monday-Friday (7:30-5:00), First Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on (703) 305-4744. The fax phone numbers for the organization where this application or proceeding is assigned is (703) 872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-0377.

ST



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